



# Colorado Legislative Council Staff

Room 029 State Capitol, Denver, CO 80203-1784  
(303) 866-3521 • FAX: 866-3855 • TDD: 866-3472  
[leg.colorado.gov/lcs](http://leg.colorado.gov/lcs)  
E-mail: [lcs.ga@state.co.us](mailto:lcs.ga@state.co.us)

## MEMORANDUM

February 22, 2017

**TO:** Interested Persons

**FROM:** Economics Staff, (303) 866-4778

**SUBJECT:** Evaluating Tax Expenditure Legislation

This memorandum provides information intended to aid in the evaluation of legislation that would create a new or alter an existing tax expenditure. State law<sup>1</sup> defines a tax expenditure as a “tax provision that provides a gross or taxable income definition, deduction, exemption, credit, or rate for certain persons, types of income, transactions, or property that results in reduced tax revenue.” Put simply, tax expenditures reduce the tax liability of qualifying taxpayers. In doing so, tax expenditures reduce the amount of revenue state and local governments collect.

### Table of Contents

Checklist for Evaluating Tax Expenditure Legislation	1
Legislative History of Tax Expenditure Evaluation	7
Estimating the Revenue Impact of a Tax Policy Change	8

The memorandum begins with a checklist of items to consider when evaluating tax expenditure legislation. This is followed by a recent legislative history of tax expenditure evaluation in Colorado, including a description of the Tax Profile and Expenditure Report published by the Department of Revenue and requirements for the Office of the State Auditor to evaluate and report on Colorado state tax expenditures in the coming years. Finally, the memo discusses the methodology Legislative Council Staff uses to estimate the revenue impact of tax expenditure legislation and issues related to estimating revenue impacts.

### Checklist for Evaluating Tax Expenditure Legislation

The following provides a list of items to consider when evaluating legislation that creates or alters a tax expenditure. Tradeoffs may exist among the considerations listed. Although most of the examples in this memorandum pertain to sales, use, and income tax expenditures, most items are also applicable to other types of tax expenditures, such as property or severance tax expenditures.

---

<sup>1</sup>Section 39-21-302(2), C.R.S.

## Tax Expenditure Structure

- **Target population.** Who may qualify for the tax expenditure? Who is ineligible?

- **Distribution of the tax burden.** How will the tax expenditure affect the distribution of the tax burden among taxpayers?

Will certain individuals or businesses benefit more or less from the tax expenditure? Will wealthier taxpayers benefit more than poorer taxpayers (regressive tax structure), or will poorer taxpayers benefit more than wealthier taxpayers (progressive tax structure)?

- **Expenditure type.** Table 1 provides a description of common tax expenditures available for state income, sales, and use taxes and the timing of when these tax expenditures may be claimed. Similar types of expenditures exist for other taxes, such as excise, fuel, or severance taxes.

### Tax Structure Definitions

A **proportional** tax structure requires all taxpayers to pay the same amount as a percentage of their income.

A **progressive** tax structure requires wealthier taxpayers to pay a larger percentage of their income than poorer taxpayers.

A **regressive** tax structure requires poorer taxpayers to pay a larger percentage of their income than wealthier taxpayers.

**Table 1**  
**Common State Tax Expenditures**

Tax Base	Tax Expenditure	Description
Income Taxes	<b>Deduction</b>	A deduction is subtracted from taxable income, reducing the amount of taxes owed by 4.63 percent of the amount deducted. The state income tax rate is 4.63 percent. Deductions are generally claimed on a taxpayer's annual income tax return.
	<b>Credit</b>	A tax credit reduces the amount of taxed owed, dollar-for-dollar. Credits may reduce or eliminate a taxpayer's income tax liability. Credits are generally claimed on a taxpayer's annual income tax return.  A <b>nonrefundable</b> tax credit is limited to the taxpayer's income tax liability, whereas, a <b>refundable</b> tax credit is not. If a taxpayer does not have a sufficient tax liability to claim the full refund, a refundable credit will result in an income tax refund for the taxpayer. If the credit is <b>transferable</b> , the taxpayer can sell the credit to a taxpayer who has a sufficient tax liability to claim the credit. Generally, credits that are not refundable or transferable can be <b>carried forward</b> for a specific number of years.
	<b>Exemption</b>	Exemptions are sources of income that are not included in the calculation of taxable income.
Sales and Use Tax	<b>Exemption</b>	Exemptions exclude certain products or services from state sales and use taxes, typically at the point of sale.
	<b>Refund</b>	Taxpayers may apply for a refund for sales taxes paid on products or services if the product or service is used for a specific purpose.
	<b>Holiday</b>	Sales tax holidays exempt sales from taxation on certain days.

- ☐ **Incentives.** Tax expenditures may reward certain taxpayer behaviors and disincentivize other behaviors. For example, allowing taxpayers to subtract charitable contributions from taxable income may encourage additional charitable donations. What behaviors are incentivized and/or disincentivized by the tax expenditure?

Smaller incentives generally influence behavior the least, while larger incentives change behavior the most. The following considerations may affect the size of the incentive and its influence on taxpayer behavior:

- How much is the tax expenditure worth to a taxpayer relative to the cost of behavior it promotes?
- How much time must the taxpayer wait to reap a monetary benefit?
- Is the tax expenditure duplicative of other local, state, or federal tax expenditures or government programs? For example, federal income tax deductions generally extend to the state level in Colorado because Colorado income tax is based on federal taxable income.

### ***Budget Considerations***

- ☐ **Revenue streams.** What source of funding does the tax expenditure impact? What will be the impact of a revenue reduction (or increase) resulting from the tax expenditure on the state budget situation and the budgets for specific programs?

Income and sales tax expenditures reduce revenue to the General Fund, which reduces the revenue available for general operating expenditures. Severance tax credits reduce revenue that is dedicated to specific natural resource and environmental restoration projects.<sup>2</sup> Property tax expenditures reduce revenue to local governments, including the local share of funding for K-12 education.<sup>3</sup> Revenue from other taxes is distributed to specific programs as well.

- ☐ **Predictability.** Is there a cap on the aggregate or individual tax expenditure amount? If not, can the revenue impact of the tax expenditure be predicted?
- ☐ **Duration.** Is the tax expenditure permanent, or does it include a repeal date?
- ☐ **Triggers.** Is the tax expenditure triggered on or off (e.g., by forecast growth in state appropriations, specific growth in an economic indicator, or a TABOR surplus)?
- ☐ **TABOR surplus situations.** Does the state have a TABOR surplus?

Tax expenditures will impact the TABOR and state budget situation differently depending on whether or not the state is in a TABOR surplus situation, and depending on whether cash funds or the General Fund is impacted by the tax expenditure.

---

<sup>2</sup>Section 39-29-108 (2), C.R.S.

<sup>3</sup>The senior homestead and disabled property tax exemptions are exceptions. The state reimburses local governments for the revenue reduction resulting from these exemptions (Colo. Const. art. X, § 3.5, and Section 39-3-207 (4), C.R.S.).

Table 2 summarizes the different TABOR and revenue impacts resulting from a tax expenditure change that either increases or decreases revenue by \$1. The revenue impacts shown in Table 2 assume that the TABOR surplus is refunded using funds from the General Fund. It is important to note that permanent tax expenditures will exist during periods when the state has a TABOR surplus and when it does not.

**Table 2**  
**General Fund and TABOR Impacts Resulting from Revenue Changes\***

TABOR Situation in Any Given Fiscal Year <sup>1</sup>	Cash Funds Revenue <sup>2</sup>		General Fund Revenue <sup>3</sup>	
	\$1 Decrease	\$1 Increase	\$1 Decrease	\$1 Increase
<b>TABOR Surplus Situation</b>	\$1 decrease in the TABOR refund; \$1 increase in available General Fund revenue.	\$1 increase in the TABOR refund; \$1 decrease in available General Fund revenue.	\$1 decrease in the TABOR refund; <i>No net General Fund impact.</i>	\$1 increase in the TABOR refund; <i>No net General Fund impact.</i>
<b>No TABOR Surplus</b>	<i>No net General Fund or TABOR refund impact.</i>		<i>No TABOR refund impact.</i> \$1 decrease in available General Fund revenue.	\$1 increase in available General Fund revenue.

\*This analysis assumes that the TABOR surplus is refunded using General Fund moneys.

<sup>1</sup> Permanent revenue changes will occur during years the state collects a surplus and years it does not.

<sup>2</sup> Cash funds revenue may be increased or reduced by severance or gas tax expenditure changes, or by other tax or fee changes that impact revenue to cash funds.

<sup>3</sup> General Fund revenue may be increased or decreased by sales, use, and income tax expenditure changes, or by other tax or fee changes that impact General Fund revenue.

### **Other TABOR Considerations**

- ☐ **Voter approval requirements.** Does a change in the tax expenditure result in a revenue increase to the state?

The TABOR Amendment requires voter approval for tax increases.<sup>4</sup> This includes tax policy changes that result in a net revenue increase that exceeds a *de minimis* amount in years when the state is expected to collect a TABOR surplus.<sup>5</sup> Fees can be increased by the state legislature without voter approval.

- ☐ **TABOR refund mechanisms.** Is the tax expenditure a mechanism to refund a TABOR surplus?

Currently, there are two TABOR refund mechanisms: the six-tier sales tax refund, and a temporary income tax rate reduction. The TABOR surplus is set aside in the budget for the fiscal year during which it is collected to be refunded the following year.

<sup>4</sup> Voter approval is also required to increase the TABOR limit, which limits the amount that the state can retain and spend or save each year.

<sup>5</sup> See the 2009 Colorado Supreme Court ruling in *Mesa County Bd. Of County Comm'rs v. State*.

## Administration

- ☐ **Workload and expenditure impacts.** How many departments are involved in administering the tax expenditure? Are personnel and/or are appropriations required to administer the tax expenditure?
- ☐ **Infrastructure.** Does the administering department have a process in place to administer the tax expenditure, or will a new process be required?

For example, the Department of Revenue already has a system in place to create a sales tax exemption, but not one to charge a different tax rate for a specific product. County property tax assessors already have a system to determine property values, but not one to determine the annual income of property owners.

### Sales and Use Tax Expenditure Administration Considerations

- ☐ **Optional tax expenditures.** If it is a sales and use tax expenditure, is compliance with the tax expenditure optional for the retailer (e.g., based on the retailer's size)?
- ☐ **Ease for retailers.** For a sales tax exemption, is the exempted product easily identifiable to retailers?

If a retailer is not able to easily identify an exempt product, the retailer will charge the tax and require the customer to apply for a refund from the Department of Revenue, driving additional administrative costs not only for the Department, but also for the taxpayer. For example, a product that is exempt only when it is used for a specific purpose is not easily identifiable by the retailer.

- ☐ **Review and auditing.** Is there a review process or third party certification process to verify taxpayer eligibility for the tax expenditure?

Refundable and transferable income tax credits generally require greater scrutiny because they are more susceptible to fraud. Conversely, an income tax expenditure that is based on a federal tax expenditure, and therefore audited by the Internal Revenue Service, may require less compliance resources from the Colorado Department of Revenue.

- ☐ **Effective dates.** Is there enough time to implement the tax expenditure prior to its effective date?
  - Income tax deductions must be in law and effective prior to the beginning of the income tax year. TABOR prohibits the state from changing the definition of taxable income during the tax year.<sup>6</sup>
  - Income tax credits can become law after the income tax year has begun. However, the Department of Revenue must be notified of tax credit availability by June 1 in the year

---

<sup>6</sup>Colo. Const. art. X, §20 (8)(a).

prior to the start of the credit to program the computer systems needed to administer the credit.

- Sales and use tax exemptions require 45 days prior to the effective date to be administered effectively. Effective dates of July 1 or January 1 provide the greatest ease of administration; alternative effective dates increase the administrative costs of providing sales tax refunds.

### ***Taxpayer Considerations***

- ☐ **Awareness.** How easy is it for the taxpayer to learn about the tax expenditure?
- ☐ **Ease.** How easy is it for the taxpayer to understand, claim, and comply with the requirements of the tax expenditure? Will compliance be costly for the taxpayer? With how many agencies must the taxpayer communicate to receive the tax expenditure? Is the process to claim the tax credit cumbersome?
- ☐ **Certainty.** For purposes of tax planning, does the taxpayer have sufficient certainty that the tax expenditure will be available in current and future tax years?
- ☐ **Tax structure interactions.** Are there local, federal, or other state tax expenditures that are either complementary to, or a substitute for, the tax expenditure?

### ***Local Government Impacts***

- ☐ **Revenue.** Which local governments, if any, are required to allow the tax expenditure? Is the impact of the tax expenditure consistent across different regions of the state?

Statutory cities and counties, some home rule cities, the Regional Transportation District, and local special districts statutorily have the same sales and use tax base as the state. Generally, any state sales and use tax expenditures will be passed on to these local governments. Tax expenditures may, however, impact local governments differently depending on the relative local government reliance on the tax revenue that the tax expenditure impacts.

- ☐ **School finance impacts.** Will the tax expenditure impact the state or local share of K-12 funding?

Property taxes are the primary source of funding for the local government share of K-12 school funding. Property tax expenditures will reduce local government revenue and may increase school finance costs for the state as a result.

- ☐ **Administration.** Do local governments have a process in place to administer the tax expenditure? Does the tax expenditure require local government administrative costs?
- ☐ **Reimbursements.** Are local governments reimbursed for administrative costs or revenue reductions resulting from tax expenditures?

## ***Tax Expenditure Evaluation***

- ☐ **Purpose.** Does the bill that creates the tax expenditure include a legislative declaration stating the intended purpose of the tax expenditure, as required by Section 39-21-304, C.R.S.?
- ☐ **Measurement.** Can the revenue impact and number of taxpayers claiming the tax expenditure be measured with ease? Can behavioral outcomes resulting directly from the tax expenditure be measured and clearly separated from behavior that would have occurred regardless of the tax expenditure?
- ☐ **Confidentiality.** Does (and should) the state and taxpayers have the ability to identify who benefits from the tax expenditure?

Taxpayer confidentiality is generally protected under Section 29-2-106 (4)(c), C.R.S., though exceptions exist. For example, taxpayers are required to consent to the release of their taxpayer information to receive some state tax credits, such as the advanced industry investment tax credit.<sup>7</sup>

## ***Legal Considerations***

- ☐ **Office of Legislative Legal Services.** Changes to tax policy may result in legal considerations that are not addressed in this memorandum. Legal inquiries may be directed to the Office of Legislative Legal Services.

## **Legislative History of Tax Expenditure Evaluation**

***Tax Profile and Expenditure Report.*** In 2011, the General Assembly adopted Senate Bill 11-184. The bill requires the Department of Revenue to produce a biennial Tax Profile and Expenditure Report (report) by January 1, 2013, and by January 1 of each odd-numbered year thereafter.<sup>8</sup> Reports are available [online](http://www.colorado.gov/pacific/revenue/colorado-tax-profile-and-expenditure-reports).<sup>9</sup> Reports are produced by staff in the department's Office of Research and Analysis and include two parts: a tax profile study and a tax expenditure study.

The *tax profile study* includes information on state and local tax collections, the distribution of state and local taxes among households of different incomes, and other statistics that broadly capture the effects of state and local tax policy on taxpayers. The tax profile study was first conducted in 1973 and predates publication of the report.

The *tax expenditure study* estimates the amount of reduced state revenue for many state tax expenditures. The study includes expenditures related to sales and use, income, severance, fuel excise, cigarette and tobacco, and alcohol taxes. Revenue impact estimates are provided where possible given data availability and taxpayer confidentiality constraints. For income tax expenditures only, the report also presents the effects of specific tax expenditures on different income classes.

---

<sup>7</sup>Section 24-48.5-112 (2)(d), C.R.S.

<sup>8</sup>Section 39-21-303, C.R.S.

<sup>9</sup><http://www.colorado.gov/pacific/revenue/colorado-tax-profile-and-expenditure-reports>

**Auditor's evaluation of tax expenditures.** In 2016, the General Assembly adopted Senate Bill 16-203. This bill requires the Office of the State Auditor (auditor) to conduct evaluations of all state tax expenditures.<sup>10</sup> Evaluations must include discussions of:

- the expenditure's purposes and intended beneficiaries;
- whether the expenditure is accomplishing its goal;
- economic costs and benefits of the expenditure;
- similar expenditures in other states;
- other government, nonprofit, or business programs accomplishing the goals of the expenditure; and
- recommendations for changes in administration or law to facilitate data collection.

Every tax expenditure must be evaluated at least once every five years beginning in September 2018. The schedule for evaluations must be determined by the auditor no later than September 15, 2017. The Department of Revenue is required to furnish the auditor with available data needed to complete its evaluations. The auditor is bound by the same requirements as the department concerning the confidentiality of taxpayer information.

**Evaluation of tax expenditures in other states.** At least 22 states and the District of Columbia have adopted legislation requiring evaluation of state tax expenditures. Many of these are structured similarly to Colorado's SB 16-203.

Evaluations are generally conducted on multi-year schedules by the agencies that administer them, which include the state auditor, the state chief financial officer, nonpartisan legislative staff, or a specifically authorized board or commission. Some states have established legislative committees responsible for determining whether expenditures should be continued, amended, or repealed. Rhode Island requires the Governor, in his or her annual budget request, to include policy recommendations for each tax expenditure evaluated in the past year. The State of Washington evaluates tax expenditures differently, enacting all tax expenditures with a ten-year sunset review and conducting evaluations in conjunction with the sunset review process.

Legislation concerning the evaluation of state tax expenditures is aggregated at the Pew Charitable Trusts [website](http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2015/01/tax-incentive-evaluation-law-state-fact-sheets).<sup>11</sup>

## Estimating the Revenue Impact of a Tax Policy Change

Legislative Council Staff (LCS) produces two kinds of revenue estimates:

- 1) **Forecast revenue estimates.** Baseline estimates of state revenue are published quarterly and assume current law.<sup>12</sup> Forecast revenue estimates reflect current expectations for Colorado and U.S. economic performance.

---

<sup>10</sup>Section 39-21-305, C.R.S.

<sup>11</sup><http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2015/01/tax-incentive-evaluation-law-state-fact-sheets>

<sup>12</sup><http://leg.colorado.gov/agencies/legislative-council-staff/forecasts-calendar-year>



- 2) **Revenue impact estimates.** Estimates of the direct change in revenue resulting from legislation and ballot measures are published in fiscal notes.<sup>13</sup> This impact is estimated as the difference between revenue collections expected under current law and expected collections should the bill or ballot measure become law. Expectations under current law assume the most recent forecast for baseline revenue.

**Revenue impact estimate methodology.** LCS fiscal notes include *static* revenue estimates that quantify the change in revenue to the state *directly* resulting from the change in law. Many tax expenditures, however, are intended to incentivize changes in taxpayer behavior. For legislation that creates a strong incentive and where data are available to estimate the resulting change in behavior, the static estimate may be expanded to include the *direct* revenue impact of the estimated behavioral change. Staff does not currently have the resources to quantify the full dynamic impacts of a given policy change. When appropriate, indirect revenue impacts may be addressed qualitatively.

The methodology for estimating the direct revenue impact of a tax expenditure will differ depending on the structure of the tax expenditure and availability of data. In general, the methodology requires:

1. **Identifying available data.** When appropriate, staff will use data produced in the baseline quarterly revenue forecast. Staff will also gather data from primary sources such as the Colorado Department of Revenue, the Colorado Office of Economic Development and International Trade, the Internal Revenue Service, the Division of Property Taxation, or other agencies charged with administering tax expenditures. Primary data are not available for all existing tax expenditures. For example, the Department of Revenue is able to provide data to the extent data are captured on a tax form and do not violate state and federal confidentiality laws. When primary data are not available, staff will also conduct market research using publicly-available economic data or by contacting representatives of the applicable industry.
2. **Identifying taxpayer populations and/or the base of economic activity to which the tax expenditure applies.** Where appropriate, staff will estimate the number of taxpayers eligible to receive the tax expenditure and the estimated taxpayer impact (average impact per taxpayer or aggregate impact) of the tax expenditure. In some cases, staff will instead estimate the aggregate dollar value of economic activity eligible for the expenditure. For example, sales and use tax exemptions require determining the total value of sales of the exempted good.
3. **Adjusting for the tax structure.** The state and federal tax structure and the structure of the tax expenditure are applied to the estimated eligible activity to determine the maximum potential revenue impact. For example, the 2.9 percent state sales and use tax rate, adjusted by the sales tax vendor fee, will be applied to the estimated total value of sales of an exempted good to determine the revenue impact of exempting the good.

Adjustments may be required to account for the ability of taxpayers to take advantage of the tax expenditure. For example, some taxpayers may not have enough income tax liability to claim the full amount of an income tax credit. Adjustments may also be required for the interactions between taxes. For example, changes in the property tax

---

<sup>13</sup><http://leg.colorado.gov/agencies/legislative-council-staff/fiscal-notes>. LCS also publishes fiscal impact statements on citizen-initiated measures before the State Title Board and for ballot measures at [coloradobluebook.com](http://coloradobluebook.com).

will affect taxable income subject to the income tax, since property taxes are deductible at the federal level. This step may also include determining whether the tax expenditure is duplicative of other existing state or federal tax expenditures.

4. **Adjusting for accrual accounting.** Section 24-75-201 (2), C.R.S., requires the state to budget on an accrual accounting basis, consistent with governmental accounting standards. Accrual accounting attributes revenue to the fiscal year during which the activity that generated the revenue occurs, rather than when the revenue was actually collected. For example, income tax expenditures are assumed to affect revenue collected or refunded along with the filing of annual income tax returns in April following the relevant tax year. The estimated revenue impact for a particular income tax year, therefore, is distributed evenly between the two fiscal years containing that tax year.

**Dynamic impacts of tax expenditures.**

Tax expenditure legislation may require certain behaviors from taxpayers in order to receive the tax expenditure. The tax expenditure will also shift spending patterns, causing the state government to have less revenue to spend and the taxpayers receiving the tax expenditure to have more money to spend. A *dynamic* revenue impact expands the static impact by attempting to measure the following:

**What is “Dynamic Modeling”?**

Dynamic modeling, or dynamic revenue analysis, considers both direct and indirect impacts of policy changes, including behavioral effects and feedback effects that ripple through the economy over time. By contrast, static analysis quantifies only the *direct* impact of a policy change (e.g., an X percentage point decrease in the income tax will decrease revenue by \$X, assuming no change in taxpayer behavior).

- the extent of behavioral change directly resulting from the tax expenditure and, where appropriate, the *direct* revenue impact of the behavioral change;
- *plus* the overall economic consequences (i.e. changes in taxpayer spending or saving) and the *indirect* impact on state revenue of additional taxpayer income and/or these behavioral changes;
- *less* the overall economic consequences and *indirect* revenue impact of foregone state spending.

As noted above, where it is feasible and appropriate, LCS will include estimates for the first step in the dynamic analysis process into a fiscal note for a tax policy change.

**Dynamic analysis considerations and limitations.** Several states have used “dynamic models” in efforts to quantify the indirect and dynamic impacts of policy changes.<sup>14</sup> Analysts in these states have found several limitations to dynamic modeling, causing some states to discontinue their use. States currently using dynamic models generally do so sparingly to compare or evaluate major tax policy changes, such as a sales tax or income tax rate change. Most states do not use dynamic modeling for fiscal note purposes due to the time demands and costs required to produce dynamic revenue estimates. The following provides a list of considerations for and limitations of the use of dynamic modeling.

---

<sup>14</sup>For a review, see: Bluestone, Peter and Carolyn Bourdeaux (2015). “Dynamic Revenue Analysis: Experience of the States.” Georgia State University, Center for State and Local Finance, and Fiscal Research Center. Available at: [http://cslf.gsu.edu/files/2015/04/Dynamic-Revenue-Analysis\\_April2015.pdf](http://cslf.gsu.edu/files/2015/04/Dynamic-Revenue-Analysis_April2015.pdf)

- 1) **Measuring behavioral changes relative to current behavior.** Estimating the extent of behavioral change directly resulting from a tax policy change — that would *not* have occurred *if not* for the change — can be difficult. The ability of staff to do so depends on the availability and suitability of data. In some cases, such as changes in demand for cigarettes following a change in the cigarette excise tax, simple elasticities that are well documented in economic literature can be used. In others, staff may be able to infer estimates using unbiased information about similar tax expenditures in other states. In many cases, data do not exist to quantify current behavioral practices, let alone behavioral changes caused by a policy change.
- 2) **Offsetting impacts.** States that have used dynamic models have generally found that tax policy changes result in smaller indirect revenue impacts than expected. Because the state must maintain a balanced budget, the indirect revenue impact of a tax policy change will always occur on the margin, with economic gains from taxpayer savings offset by economic losses resulting from reduced state spending elsewhere. Whether the marginal impact is negative or positive depends on the strength of the behavioral and economic response to each policy. Quantifying this is complicated by the fact that knowledge of how the state legislature would have chosen to spend the money in the absence of the tax expenditure is unavailable.

It is also important to note that tax expenditures intended to incentivize a particular behavior will equally reward those who are induced to engage in that behavior exclusively because of the incentive and those who would have done so regardless of the incentive. While state revenue is reduced for both cohorts, economic gains resulting from behavioral changes are accrued only from those who engage in the behavior exclusively because of the tax policy change.

- 3) **Timing.** The behavioral changes and attendant ripple effects through the economy can take up to several years to fully materialize. However, the direct revenue impact of a tax policy change must be addressed immediately within the state budget.
- 4) **Out-of-state leakages.** Money spent by the state is usually directed towards programs and individuals within the state, while the private sector is not constrained by state borders. “Leakage” often occurs, for example, if money saved from a tax break to multi-state, multi-national, or publicly held corporations is then distributed to out-of-state shareholders or reinvested outside of the state.
- 5) **Costs and complexity.** Dynamic models are expensive and staff lacks confidence that they are either an accurate representation of the economy or capable of presenting fully unbiased outcomes. Dynamic models rely on thousands of assumptions about human behavior and economic linkages, some of which may require normative judgements. In addition, the models rely on a large quantity of data that can be limited, inaccurate, and subject to frequent revisions. Further, the models are generally not detailed enough to address targeted tax policy changes, such as the impact of a new tax expenditure, and do not easily accommodate Colorado’s unique constitutional requirements.

Finally, the complexity of the economy prevents the accuracy of a dynamic revenue estimate from being measured. The outcome of the tax policy change cannot be differentiated from the outcomes of simultaneous changes in social norms, laws, and the business cycle. This prevents relational comparisons between “actual” and estimated dynamic impacts.